AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-15. (Canceled)

16. (Currently amended) An immersion sensor for measuring the concentration of at least one analyte with the aid of an oxidase, wherein said immersion sensor comprises said oxidase in an enzyme region ~~covered by~~ coupled on at least one side to an analyte-impermeable, oxygen-permeable membrane having no analyte window, ~~material and~~ said enzyme region connected to the surface of the sensor via at least one channel which contains water and is permeable to the analyte~~, but due to its geometry limits diffusion~~.

17. (Original) The immersion sensor as set forth in claim 16, wherein the enzyme region contains water.

18. (Currently amended) The immersion sensor as set forth in claim 16, wherein the at least one channel ~~comprises an at least one diffusion-limiting channel and~~ leads through an impermeable material of the immersion sensor.

19. (Currently amended) The immersion sensor as set forth in claim 17, wherein said at least one channel is filled, ~~on or near~~ adjacent to the surface of the sensor, with a porous substance which is impermeable to proteins.

20. (Currently amended) The immersion sensor as set forth in claim 17, wherein on the surface of the sensor, the channel passes into a protein-impermeable, hydrophilic layer ~~and/or the channel cross-section is larger than in the diffusion-limiting part~~.

21- 23. (Canceled)

24. (Previously Presented) The sensor according to claim 16, wherein the sensor is configured such that the analyte diffuses into the enzyme region.

25. (Previously Presented) The sensor according to claim 16, wherein the enzyme region is an enzyme layer.

26. (Canceled)

27. (Currently amended) The sensor according to claim [[26]] 16, wherein ~~in an area limiting flow,~~ a length of the channel exceeds a thickness of the membrane.

28. (Currently amended) The sensor according to claim [[26]] 16, wherein the enzyme layer borders an inner gas space of the sensor from within.

29. (Previously Presented) The sensor according to claim 28, wherein the inner gas space is connected to an oxygen reservoir.

30. (Currently amended) The sensor according to claim 28, wherein ~~a thin~~ the analyte-impermeable, oxygen-permeable membrane having no analyte window is situated between the enzyme layer and the inner gas space.

31. (Canceled)

32. (Previously Presented) The sensor according to claim 16, wherein the channel forms the only way of transporting analyte to the enzyme.

33. (Currently amended) The sensor according to claim 16, wherein a diffusion resistance of the analyte in said channel is determined by a ~~ration~~ ratio of a length of the diffusion ~~path~~ channel and a cross-section of the diffusion ~~path~~ channel.

34. (Previously Presented) The sensor according to claim 16, wherein a length of the channel is between 0.1 mm and 1 mm.

35. (Currently amended) The sensor according to claim 16, wherein said surface of said sensor comprises a porous layer, said porous layer providing an increased ~~effective~~ cross-section of the channel ~~on a surface of the sensor leads to a leveling out of~~, whereby outer concentration gradients level out thereby reducing the effect of outer deposits on diffusion flow.

36. (Previously Presented) The sensor according to claim 16, wherein the channel passes into a hydrophilic, porous and protein-excluding layer.

37. (Currently amended) The sensor according to claim 16, wherein the channel leads through a water-impermeable material and at a surface of the sensor is filled with a ~~defined~~ hydrophilic porous substance.